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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/623,198

07/18/2003

Bruce Baretz

4241-198 CON

2836

23448

7590

03/02/2009

INTELLECTUAL PROPERTY / TECHNOLOGY LAW

PO BOX 14329

RESEARCH TRIANGLE PARK, NC 27709

EXAMINER

KALAM, ABUL

ART UNIT

PAPER NUMBER

2814

MAIL DATE

DELIVERY MODE

03/02/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/623,198 | <b>Applicant(s)</b><br>BARETZ ET AL. |  |
|                              | <b>Examiner</b><br>Abul Kalam        | <b>Art Unit</b><br>2814              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 31,33-36,44,47,48,51,52,70,71 and 73-76 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31,33-36,44,47,48,51,52,70,71 and 73-76 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/09/08</u> .  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Objections***

1. Claims objected to because of the following informalities:

The limitation of "each LED/phosphor assembly" should be amended to --the LED/phosphor assembly--, in claims 33-36, 44 and 47, because only one LED/phosphor assembly is recited in claim 70.

The limitation of "a multiplicity of LED/phosphor assemblies" in claim 51 should be amended to --a multiplicity of the LED/phosphor assembly--, because only one LED/phosphor assembly is recited in claim 70.

The limitation of "an array of LED/phosphor assemblies" in claim 71 should be amended to --an array of the LED/phosphor assembly--, because only one LED/phosphor assembly is recited in claim 70.

The limitation of "a plurality of LED/phosphor assemblies" in claim 73 should be amended to --a plurality of the LED/phosphor assembly--, because only one LED/phosphor assembly is recited in claim 70.

The limitation of "an individual LED/phosphor assemblies" in claim 74 should be amended to --each of the LED/phosphor assembly--, because only one LED/phosphor assembly is recited in claim 70.

The limitation of "LED/phosphor assemblies" in claim 75 should be amended to --the plurality of LED/phosphor assembly--, because only one LED/phosphor assembly is recited in claim 70.

The limitation of "all LED/phosphor assemblies" in claim 76 should be amended to --each of the LED/phosphor assembly--, because only one LED/phosphor assembly is recited in claim 70.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 31, 33-36, 44, 47, 48, 52 and 70 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu (JP 08007614 A; a machine translation of the Japanese Application is relied upon for the rejection).

With respect to independent claim 70, Shimizu discloses a liquid crystal display comprising a backlight structure (Figs. 1 and 2) including an LED/phosphor assembly (1/5, Fig. 2) in which the LED (1) is energizable to emit radiation and the phosphor (5) is arranged to be impinged by radiation from the LED (1) so that LED/phosphor assembly produces white back light illumination for the liquid crystal display (¶ [0005], [0009]-[0010] of the translation).

Regarding claim 31, Shimizu discloses wherein the LED is energizable to emit radiation with an emission maximum in a spectral range of the blue to ultraviolet spectrum (¶ [0010]: "blue LED").

Regarding claim 33, Shimizu discloses wherein the phosphor in the LED/phosphor assembly comprises a material responsively emitting radiation in at least the green spectrum (¶ [0016]: “green fluorescent pigment”).

Regarding claim 34, Shimizu discloses wherein the LED in the LED phosphor assembly comprises a blue light LED (¶ [0010]: “blue LED”).

Regarding claim 35, Shimizu discloses wherein the white light back light illumination produced the LED/phosphor assembly comprises primary radiation emission from the LED and secondary radiation emission from the phosphor (¶ [0010]).

Regarding claim 36, Shimizu discloses wherein the LED in each LED/phosphor assembly comprises gallium nitride (¶ [0017]).

Regarding claims 44 and 52, Shimizu discloses wherein the LED/phosphor assembly produces white light (¶ [0010], [0017]). Regarding the claimed electrical circuitry and power supply, note that it is inherent that electric circuitry must be operatively coupled with the display and the LED/phosphor assembly, and that a power supply is coupled with the electrical circuitry, in order for the device to function.

Regarding claim 47, Shimizu discloses wherein the phosphor in the LED/phosphor assembly comprises a material responsively emitting radiation in at least the red spectrum (¶ [0016]: “red fluorescent pigment”).

Regarding claim 48, Shimizu discloses wherein the phosphor comprises a material responsively emitting radiation in at least the yellow spectrum (¶ [0018]).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 51, 71 and 73-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (presented above), as applied to claim 70, and further in view of Stevenson et al. (US 3,819,974; previously cited).

Regarding claims 71 and 73, Shimizu discloses a LED/phosphor assembly (Fig. 2) arranged to produce white light back light illumination for the liquid crystal display, as set forth in the rejection of claim 70 above. However, Shimizu does not disclose an a regular pattern array of the LED/phosphor assembly. However, Stevenson discloses an LED/phosphor assembly (col. 3, Ins. 24-31), wherein a regular pattern array of the LED/phosphor assembly may be used for color display systems (col. 4, Ins. 3-7). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Stevenson and Shimizu, to form a plurality of the LED/phosphor assembly in a regular pattern array, to produce white light back light illumination, for color display systems such as TV screens. Furthermore, note that

LED/phosphor assemblies in regular pattern arrays were well known and conventional, at the time of the invention.

Regarding claims 74-76, note that the limitations of “selectively illuminable,” “are controlled by a controller in response to a user input,” and “simultaneously illuminated,” are considered a functional limitations. It has been held that an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board’s finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re Swinehart*, 439 F.2d 210 212-13, 169 USPQ 226, 228-29 (CCPA 1971); *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). “Apparatus claims cover what a device is, not what a device does.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Furthermore, such limitations do not appear to be critical to the invention, nor do they yield unpredictable results. Therefore, such limitations would have been considered obvious to one of ordinary skill in the art, at the time of the invention, because such device functions are well known and conventional in the art.

Regarding claim 51, Shimizu teaches the LED/phosphor assembly of claim 70, and having a multiplicity of the LED/phosphor assembly would have been obvious to one of ordinary skill in the art, at the time of the invention, since it has been held that

mere duplication of the essential working parts of a device involves only routine skill in the art. *St Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

### ***Response to Arguments***

4. Applicant's arguments filed December 18, 2008, including the Affidavit, have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abul Kalam whose telephone number is (571)272-8346.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/A. K./  
Examiner, Art Unit 2814

/Phat X. Cao/  
Primary Examiner, Art Unit 2814